

Remarks:

In the present paper, claims 45, 46, 48, 51, 74, 75, 77, 78, 82, 84-90, 96, and 97 have been amended, claim 47 has been cancelled, and new claims 103 and 104 have been added.

Support for the amendments herein can be found throughout the specification, for example, at paragraphs 61, 62, 66, 69, and Figure 7 of the applicant's Published Patent Application No. 2003/0046335. Support for new claims 103 and 104 can be found, for example, in paragraphs 42 and 46, respectively. No new matter is believed to have been added.

35 U.S.C. § 112, second paragraph

Claims 74-79, 86, and 96-98 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner argues that the claimed phrase "other" in the claims renders the claims indefinite because it is unclear which one of the servers is actually considered the "other web server", rendering the scope of the claim unascertainable.

Claims 74, 86, and 96 have been herein amended to remove reference to the phrase "other web server" in the above claims. Additional amendments have also been provided for clarity and to correct minor grammatical errors.

For example, as amended herein, claim 74 recites in pertinent part:

    "...evaluating at least one characteristic of the particular object;  
    retrieving a redirect file that instructs a web server receiving the request to return a response message including the location of the requested object on the associated storage device of the intelligent storage system if the at least one evaluated characteristic of the particular object is satisfied, the response message being configured to redirect the request to the control unit of the intelligent storage system; and  
    locating an object serving link that is utilized by the web server receiving the request to obtain the object from the intelligent storage system and return the object in response to the request if the evaluated at least one characteristic of the particular object is not satisfied."

Claim 86, as amended herein, recites in pertinent part:

    "...wherein the web server is configured to retrieve a redirect file that instructs the web server receiving the request to return a response message including the location of the

particular object on the associated storage device of the intelligent storage system, the response message being configured to redirect the request to the control unit of the intelligent storage system if the at least one evaluated characteristic of the particular object is met, and to locate an object serving link that is utilized by the web server receiving the request to obtain the particular object in response to the request if the evaluated characteristic of the particular object is not met.”

Claim 96, as amended herein, recites in pertinent part:

“...computer readable program code configured to retrieve a redirect file that instructs a web server receiving the request to return a response message including the location of the particular object on the associated storage device of the intelligent storage system, the response message being configured to redirect the request to the control unit of the intelligent storage system if the at least one evaluated characteristic of the particular object is satisfied; and

computer readable program code configured to locate an object serving link-that is utilized by the web server receiving the request to obtain the object from the intelligent storage system and return the object in response to the request if the at least one evaluated characteristic of the particular object is not satisfied.”

It is applicants’ position that the claims, as herein amended, are definite within the meaning of 35 U.S.C. § 112, second paragraph. Thus, applicants respectfully request that the rejections of independent claims 74, 86, and 96 and the claims that depend there from, be withdrawn.

35 U.S.C. § 103

Claims 45-49, 51-79, and 82-98 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. No. 6,173,322 B1 to *Hu* (hereinafter, *Hu*) in view of U.S. Patent No. 6,535,518 B1 to *Hu et al.* (hereinafter, *Hu et al.*). According to M.P.E.P. §706.02(j) to establish a *prima facie* case of obviousness, the prior art reference(s) must teach or suggest all of the claim limitations.

*Hu* teaches in relevant part, a network request manager 102 that handles client requests directed to a web site. The network request manager 102 acts as an intermediary between a client 104 and one or more content servers 106. That is, the network request manager 102 handles client requests directed to a web site by selecting a content server 106 from the group of available content servers that are capable of servicing the specific client request. The network request manager

further causes a connection to be established with the selected content server 106 so that the request may be fulfilled<sup>1</sup>.

The network request manager comprises a plurality of "modules" including a *connection module* 208 that establishes a connection between a client computer and a content server 106 that is assigned by the network request manager 102 to service the client in either a *proxy mode* or a *redirect mode*. In *proxy mode*, the network request manager acts on behalf of the client by *forwarding client requests* to the selected content server for servicing and by returning the results from the selected content server to the client. In *redirect mode*, the network request manager returns a web site address of the selected content server 106, or other suitable information to the client.<sup>2</sup> Using this information, the client 104 *re-transmits the client request* to the identified content server 106 and receives the results directly from that selected content server<sup>3</sup>.

For example, as noted in *Hu*:

"...FIG. 9B is a diagram 902 illustrating network request manager 102 in a redirect mode of operation. In redirect mode, network request manager 102 receives the client request and selects an appropriate content server 106 as before. Here, however, network request manager 102 responds to the client request with information that will allow client 104 to contact content server 106 directly. For example, *network request manager 102 might respond with the web site address of content server 106*. Using this information, *client 104 re-transmits the client request to content server 106* and receives the results directly..."<sup>4</sup> (emphasis added)

As can be seen, in the redirect mode taught by *Hu*, the network request manager performs two primary tasks. It selects a content server from a plurality of content servers associated with the network request manager 102 to service the client request (utilizing a *rules module* 204 and a *policy module* 206), then the network request manager 102 "hands off" the client to the selected *content server*.

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<sup>1</sup> See *Hu* Col. 4, lines 4-12; Fig. 1.

<sup>2</sup> See for example, *Hu*, Col. 3, lines 3-10; Col. 4, lines 4-14; Col. 5, lines 20-54.

<sup>3</sup> See for example, *Hu*, Col. 11, lines 17-27; Col. 12, lines 43-52.

<sup>4</sup> See for example, *Hu*, Col. 11, lines 16-27.

In relevant part, *Hu et al.* teaches a network switch decodes object requests and forwards such requests either to a server for further processing or to a storage device in accordance with the nature of the transfer<sup>5</sup>. The decoding operation is performed by the switch at a high protocol layer before the packet reaches a server in order to enable server bypass for storage oriented requests needing no processing by a server<sup>6</sup>.

#### Claim 45

With specific reference to claim 45, *as amended herein*, the applicants respectfully assert that a *prima facie* case of obviousness has not been established because *Hu* and *Hu et al.*, either alone or in combination, fail to teach or suggest:

“...returning a response message from the web server to the sender if the at least one predetermined criterion is met, wherein the response message includes a location of the object on the associated storage device of the intelligent storage system, and the sender utilizes the response message to obtain the object in a manner that bypasses the web server for outbound traffic from the intelligent storage system to the client....”

*Hu* does not teach or suggest returning a response message from the web server to the sender, wherein the response message includes a location of the object on the associated storage device of the intelligent storage system. Rather, as noted above, the network request manager is merely an intermediary that can either forward (proxy) client requests to a selected content server, or the intermediary can (redirect) inform the client how to contact the selected content server. Regardless, it is the selected content server (and not the content request manager) that is responsible for obtaining and serving any requested object.

Thus, *Hu* fails to teach or suggest that the network request manager knows the location on an associated storage device of an intelligent storage system, of any object requested by the client and is completely silent in this regard. Further, *Hu* is completely silent with regard to any form of storage device for storing objects, and fails to teach or suggest that the content request manager would know the storage locations of any objects.

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<sup>5</sup> See *Hu et al.* Col. 3, lines, 25-42; Col. 4, lines 1-15; Col. 5, lines 26-61; Col. 6, lines 42-58.

<sup>6</sup> See *Hu et al.* Col. 5, lines, 12-21.

Regardless of whether the client request is forwarded to a content server 106 from the network request manager 102, or whether the client request is sent to the selected content server 106 by the client itself, the entire responsibility of servicing that request is left to the selected one of the plurality of content servers. In this regard, *Hu* is completely silent concerning how the various content servers 106 interact with the common data set 1102. Still further, there is no teaching or suggestion in *Hu* that the selected content server 106 can somehow instruct the client where to obtain a requested object directly from within the common data set 1102 or that client requests can somehow be served directly by the common data set 1102<sup>7</sup>.

Nowhere in *Hu* is there a teaching or suggestion that either the network request manager or the selected content server provides the location of the requested object to the client. Irrespective of proxy or redirect mode, the network request manager in *Hu* never actually services client requests directly but rather passes client requests to a selected content server for servicing.

Additionally, *Hu* does not teach or suggest returning a response message from the web server to the sender where the sender utilizes the response message to obtain the object in a manner that bypasses the web server for outbound traffic from the intelligent storage system to the client. Rather, as noted above, in *Hu*, if a redirect mode is selected by the network request manager, the client receives the address of the selected content server. The client must then retransmit the client request to the content server. Thus, it appears as if the client is being required to open a new session with the specified content server in order to have the client request serviced. In *Hu*, the network request manager simply hands off the client to a selected content server (another web server) to service the client request.

The combination of references further fails to teach or suggest the claimed invention. For example, the secondary reference *Hu et al.* does not teach or suggest returning a response message that includes the location of the requested object on an intelligent storage system to the sender requesting the object as required by Claim 45, as herein amended.

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<sup>7</sup> See for example, *Hu*, Fig. 9A, 11.

For example, in *Hu et al.*, a three-way network switch is utilized to connect a requesting network connection with either a server or storage depending upon the nature of the request<sup>8</sup>. In order to determine the nature of the request, i.e., server oriented or storage oriented, the decoding is performed by the switch at a high protocol level *before* the packet reaches the server<sup>9</sup>. Server oriented requests are forwarded to a server system for further processing while storage oriented requests are forwarded directly to storage, thus bypassing the server entirely.<sup>10</sup>

Thus, if the request is determined to be storage related, the server is completely bypassed. Accordingly, the server does not return a response message including the location of the requested object in storage to the requester of the object as required by claim 45, as herein amended because the server never even sees the request. Similarly, if the request is determined to be server related, the network switch forwards the request directly to the server for further processing, bypassing the storage system. Again, no response message including the location of a requested object is sent to the requesting client.

In view of the amendments, herein, and the clarifying comments above, the applicants respectfully request that the rejection to claim 45 be withdrawn.

#### Claim 74

With specific reference to claim 74, *as amended herein*, the applicants respectfully assert that a *prima facie* case of obviousness has not been established because *Hu* and *Hu et al.*, either alone or in combination, fail to teach or suggest:

“...retrieving a redirect file that instructs a web server receiving the request to return a response message including the location of the requested object on the associated storage device of the intelligent storage system if the at least one evaluated characteristic of the particular object is satisfied, the response message being configured to redirect the request to the control unit of the intelligent storage system....”

Claim 74, as herein amended, recites elements similar to that of claim 45, and as such, the arguments pertaining to claim 45 above apply by analogy to claim 74. In view of the amendments

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<sup>8</sup> See *Hu et al.* Col. 4, lines 61-66, Figs. 8, 9.

<sup>9</sup> See *Hu et al.* Col. 4, lines 61-66; Col. 5, lines 12-21.

<sup>10</sup> *Id.*

and the clarifying comments, herein, the applicants respectfully request that the rejection to claim 74 be withdrawn.

#### Claim 82

With specific reference to claim 82, *as amended herein*, the applicants respectfully assert that a *prima facie* case of obviousness has not been established because *Hu* and *Hu et al.*, either alone or in combination, fail to teach or suggest:

“...returning a redirect code to the sender to redirect the request to the control unit of the intelligent storage system, wherein the redirect code includes a location of the object on the intelligent storage system, and the sender utilizes the redirect code to obtain the object in a manner that bypasses the web server for outbound traffic from the intelligent storage system to the client without transferring a corresponding session between the web server and the sender to a different web server....”

Claim 82, as herein amended, recites elements similar to that of claim 45, and as such, the arguments pertaining to claim 45 above apply by analogy to claim 82. In view of the amendments and the clarifying comments, herein, the applicants respectfully request that the rejection to claim 82 be withdrawn.

#### Claim 86

With specific reference to claim 86, *as amended herein*, the applicants respectfully assert that a *prima facie* case of obviousness has not been established because *Hu* and *Hu et al.*, either alone or in combination, fail to teach or suggest:

“...retrieve a redirect file that instructs the web server receiving the request to return a response message including the location of the particular object on the associated storage device of the intelligent storage system, the response message being configured to redirect the request to the control unit of the intelligent storage system....”

Claim 86, as herein amended, recites elements similar to that of claim 45, and as such, the arguments pertaining to claim 45 above apply by analogy to claim 86. In view of the amendments and the clarifying comments, herein, the applicants respectfully request that the rejection to claim 86 be withdrawn.

#### Claim 87

With specific reference to claim 87, *as amended herein*, the applicants respectfully assert that a *prima facie* case of obviousness has not been established because *Hu* and *Hu et al.*, either alone or in combination, fail to teach or suggest:

“...return a response message from the web server to a sender if the at least one predetermined criterion is met, wherein the response message includes a location of the object on the associated storage device of the intelligent storage system, and the sender utilizes the response message to obtain the object in a manner that bypasses the web server for outbound traffic from the intelligent storage system to the client without transferring a corresponding session between the web server and the sender to a different web server....”

Claim 87, as herein amended, recites elements similar to that of claim 45, and as such, the arguments pertaining to claim 45 above apply by analogy to claim 87. In view of the amendments and the clarifying comments, herein, the applicants respectfully request that the rejection to claim 87 be withdrawn.

#### Claim 96

With specific reference to claim 96, *as amended herein*, the applicants respectfully assert that a *prima facie* case of obviousness has not been established because *Hu* and *Hu et al.*, either alone or in combination, fail to teach or suggest:

“...retrieve a redirect file that instructs a web server receiving the request to return a response message including the location of the particular object on the associated storage device of the intelligent storage system, the response message being configured to redirect the request to the control unit of the intelligent storage system....”

Claim 96, as herein amended, recites elements similar to that of claim 45, and as such, the arguments pertaining to claim 45 above apply by analogy to claim 96. In view of the amendments and the clarifying comments, herein, the applicants respectfully request that the rejection to claim 96 be withdrawn.

New claims 103 and 104 each depend from base claim 45, which, as herein amended, the applicants believe is patentable over the cited prior art as described more fully herein.



Conclusion

For all of the above reasons, the applicants respectfully submit that the above claims recite allowable subject matter. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,  
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